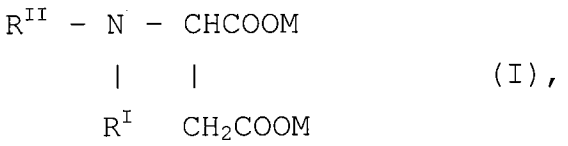
Amendments to the Claims

1.(previously presented) A froth flotation process for the enrichment of a calcium phosphate- containing mineral from an ore also containing calcium carbonate, wherein the process is performed in the presence of a collector, wherein said collector is a derivative of aspartic acid of the formula

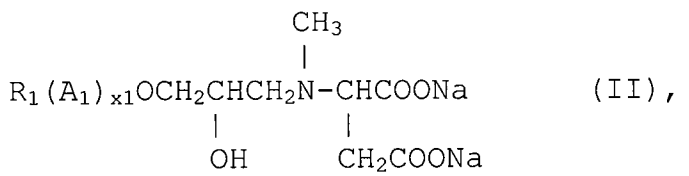


(I),

where R^I is a hydrophobic group containing a hydrocarbon group of 6-24 carbon atoms; R^{II} is an alkyl group with 1-7 carbon atoms or a group of the formula $(B)_yH$, in which B is an alkyleneoxy group with 2-4 carbon atoms and y is a number from 1 to 10; and M is a group selected from the group consisting of a cation or hydrogen.

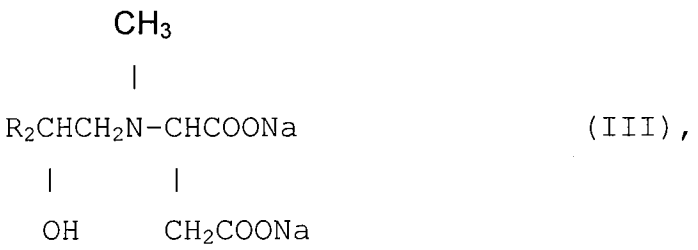
2.(previously presented) The froth flotation process of claim 1 wherein R^I is a glycidyl ether group of the formula $CH_2CH(OH)CH_2O(A_1)_{x1}R_1$, in which R_1 is a hydrocarbon group with 8-24 carbon atoms, A_1 is an alkyleneoxy group with 2-4 carbon atoms and x1 is a number from 0 to 10; a hydroxyl group of the formula $CH_2CH(OH)R_2$, in which R_2 is a hydrocarbon group with 6-22 carbon atoms; a propylene ether group of the formula $C_3H_6O(A_3)_{x3}R_3$, in which R_3 is a hydrocarbon group with 8-24 carbon atoms, A_3 is an alkyleneoxy group with 2-4 carbon atoms and x3 is a number from 0-10; or a group of the formula R_4, where R_4 is a hydrocarbon group containing 8-24 carbon atoms.

3. (previously presented) The froth flotation process of claim 2, wherein the derivative is selected from the group consisting of

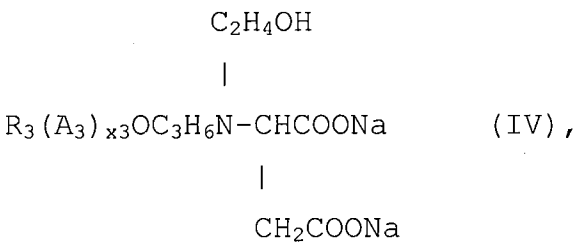


(II),

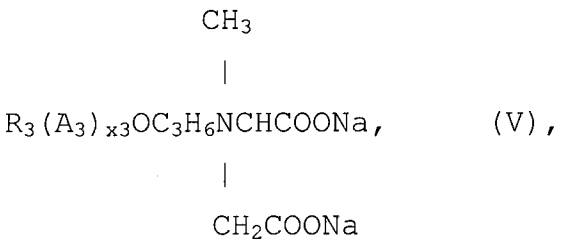
where R_1, A_1, x1 have the same meanings as in claim 2,



where R_2 has the same meaning as in claim 2,



where R_3, A_3 and x3 have the same meanings as in claim 2, and



where R_3, A_3 and x3 have the same meanings as in claim 2, and mixtures of two or more of the derivatives of formula II, III, IV or V.

4.(previously presented) The froth flotation processof claim 2 wherein A_1 and A_3 are both ethyleneoxy and x_1 and x_3 are each independently selected from a number of from 1-4.

5. (previously presented) The froth flotation process of claim 1 wherein R^{II} is methyl, hydroxyethyl or hydroxypropyl.

6. (previously presented) The froth flotation process of claim 1 wherein the derivative is present in an amount of 10-1500 grams per ton of the ore.

7. (previously presented) The froth flotation process of claim 1 wherein the process is performed in the presence of a polar co-collector of the formula

$R^{III}(A)_pOH$ (VI),

in which R^{III} is a hydrocarbon group with 8-22 carbon atoms, A is an oxyalkylene group having 2-4 carbon atoms and p is a number from 1-6, or of the formula

$$R^{IV}CO(A)_qY \quad \text{(VII)},$$

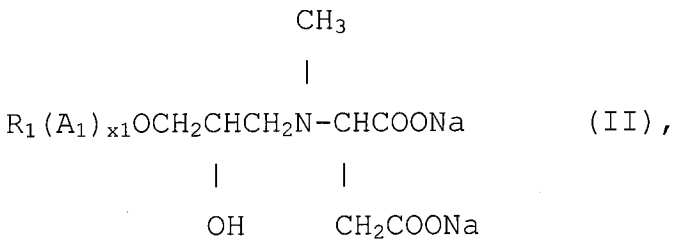
in which R^{IV} is an aliphatic group having 7-21 carbon atoms, A is an alkyleneoxy group having 2-4 carbon atoms, q is a number from 0-6, and Y is an alkyl group having 1-4 carbon atoms or hydrogen, provided that Y cannot be hydrogen when q is zero.

8. (currently amended) A derivative of aspartic acid of the formula

$$R^{II} - N(R^{I}) - CH(CH_2COOM)COOM \quad \text{(I)},$$

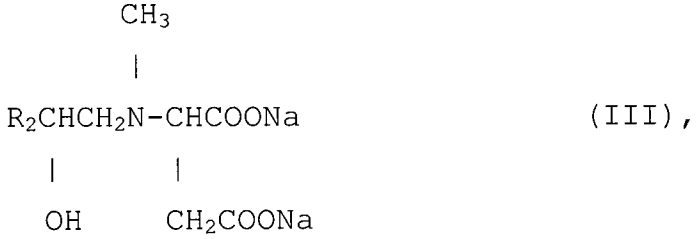
where R^{I} is a glycidylether group of the formula $CH_2CH(OH)CH_2O(A_1)_{x1}R_1$, in which R_1 is a hydrocarbon group with 8-24 carbon atoms, A_1 is an alkyleneoxy group with 2-4 carbon atoms and x1 is a number from 0 to 10; a hydroxyl group of the formula $CH_2CH(OH)R_2$, in which R_2 is a hydrocarbon group with 6-22 carbon atoms; a propylene ether group of the formula $C_3H_6O(A_3)_{x3}R_3$, in which R_3 is a hydrocarbon group with 8-24 carbon atoms, A_3 is an alkyleneoxy group with 2-4 carbon atoms and x3 is a number from 0-10; or a group of the formula R_4, where R_4 is a hydrocarbon group containing 8-24 carbon atoms; R^{II} is an alkyl group with 1-7 carbons atoms or a group of the formula $(B)_yH$, in which B is an alkyleneoxy group with 2-4 carbon atoms and y is a number from 1 to 10; with the proviso that when R^{II} is an alkyl group with 1-7 carbon atoms then R^{I} is not ~~a group RCO, where R is a C7-C21 alkyl or alkenyl,~~ a group R, where R is a C8-C22 alkyl or alkylene group, or a group $(CH_2)_3OR$, where R is a C8-C22 alkyl or alkylene group; wherein when R^{II} is a group $-CH_2CH_2OH$ then R^{I} is not a group R, where R is a C8-C22 alkyl or alkylene group; and M is a group selected from the group consisting of a cation or hydrogen.

9. (currently amended) The derivative of claim 8, wherein it is selected from the group consisting of



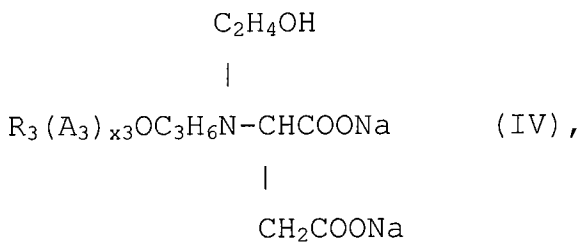
(II),

where R_1, A_1 x1 have the same meanings as in claim ~~8~~2,



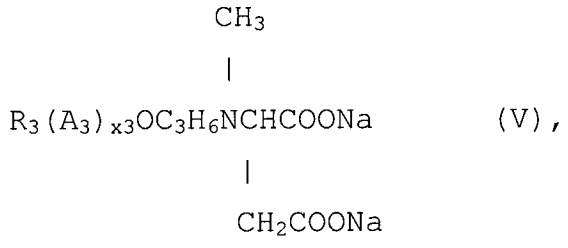
(III),

where R_2 has the same meaning as in claim ~~8~~9,



(IV),

where R_3, A_3 and x3 have the same meanings as in claim ~~8~~9, and

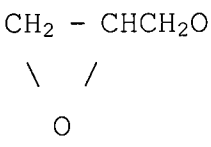


(V),

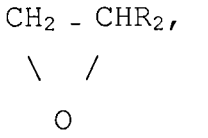
where R_3, A_3 and x3 have the same meanings as in claim ~~8~~9, and mixtures of two or more of the derivatives of formula II, III, IV or V.

10. (previously presented) A method of producing a derivative according to claim 8, which comprises reacting maleic acid or a salt thereof under alkaline conditions with

a) a primary amine of the formula $R^{II}NH_2$, where R^{II} has the meaning mentioned above, followed by reacting the intermediate obtained with a glycidylether of the formula



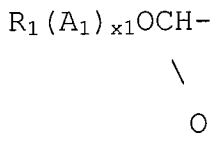
where R_1, x1 and A_1 have the meanings mentioned above, an epoxide of the formula



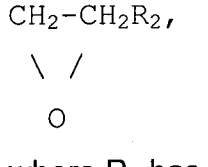
where R_2 has the meaning mentioned above, or a halide compound of the formula $HalR_4$, where Hal is a halide and R_4 has the meaning above; or

b) with a primary amine of the formula $R^{I}NH_2$, where R^{I} has the meaning mentioned above, followed by reacting the intermediate obtained with a halide compound of the formula $HalR^{II}$, where Hal is a halide and R^{II} has the meaning mentioned above.

11. (previously presented) The method of claim 10wherein i) the disodium salt of maleic acid is reacted with N-methylamine and the obtained (N-methyl)aspartate disodium salt is further reacted with a compound of the formula



where R_1, A_1 and x_1 have the same meanings as in claim 11 to an aspartate of the formula II, or with a compound of the formula



where R_2 has the same meaning as in claim 2, to obtain an aspartate of the formula III, or

ii) the monosodium salt of maleic acid is reacted with an ether amine of the formula

$R_3(A_3)_{x3}OC_3H_6NH_2$,

where R_3, A_3 and x_3 have the meanings mentioned in claim 11 to obtain an intermediate of the formula

$$R_3(A_3)_{x3}OC_3H_6NH\underset{\displaystyle CH_2COOH}{\underset{|}{C}}HCOONa,$$

which intermediate is further reacted with $Cl(CH_2CH_2O)H$ or CH_3Cl and with NaOH to obtain a derivative of formula IV and V, respectively.

12. (previously presented) The froth flotation process of claim 3 wherein A_1 and A_3 is ethyleneoxy and x_1 and x_3 are each independently selected from a number of from 1-4.

13. (previously presented) The froth flotation process of claim 2 wherein R^{II} is methyl, hydroxyethyl or hydroxypropyl.